

Substitute Abstract  
U.S. Application No. 09/846,879

## PATENT APPLICATION

ABSTRACT OF THE DISCLOSURE

An optical cross connect switch having a beam generating, beam directing, and beam receiving portions is disclosed. In one embodiment, the beam generating portion receives a number of optical fibers and generates a communication and companion alignment beam for each fiber. The communication and alignment beams may be spatially separated, substantially collimated beams, and are aligned to propagate away from the beam generating portion in substantially parallel paths. The communication and alignment beams then strike a beam directing element where they may be redirected to the beam receiving portion. A beam receiving portion includes a plurality of optical output fibers, each having an associated position sensor. The location where the alignment beam strikes the position sensor provides position information regarding the corresponding communication beam. Using the position information, the beam directing elements may be finely adjusted to direct the focused communication beam onto an optical output fiber.